

August 23, 2011

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

RE: **Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage through the Use of Signal Boosters, WT Docket No. 10-4**

Dear Ms. Dortch:

I applaud the Commission's endeavor to adopt rules for the design, installation and use of signal boosters so that there is no interference to the carrier's wireless networks. And agree with the three category approach proposed by Verizon Wireless, Wilson Electronics and V-COMM to account for the differences in the way each category of booster is designed, installed and operated.

However there are several technical points that are not addressed. Following is a review of the technical specifications suggested in their joint proposal in regards to the Consumer Boosters category. Then, I will address the technical points not addressed in the specifications. Joint Proposal recommendations for Consumer Boosters:

- The specifications for Consumer Boosters are designed to enable signal boosters to be installed by consumers and operated without causing harm to CMRS networks.
- Consumer Boosters may be installed and used by consumers for use in buildings or vehicles.
- The specifications are technology neutral and provide protection to all CMRS network technologies and that are used on Cellular, PCS, AWS and 700 MHz commercial mobile radio frequency bands.
- Consumer Boosters must be FCC Type Certified to meet the specifications set forth in the Joint Proposal.
- Consumer Boosters must be bi-directional RF amplifiers.
- Consumer Boosters must be registered with the licensed carriers, either manually or through a Bluetooth connection to the device.
- Consumer Boosters must not exceed 1 Watt uplink composite power per band of operation and 0.05 Watt downlink composite power per band of operation.

- Consumer Boosters must meet the proposed requirements for antenna gain, emission limits, automatic gain control (AGC), wide band signal design, anti-oscillation protection, in-band noise and base station (BTS) overload limits.

Following are the specifications from above with my suggestions for change. I've included reasons for these suggestions.

Specification above: Consumer Boosters may be installed and used by consumers for use in buildings or vehicles.

Suggested revision: Consumer Boosters may be installed and used by consumers for use outside, in buildings or vehicles.

Explanation: Signal boosters can be designed for use outside of buildings or vehicles and there is no reason to limit their use to just buildings and/or vehicles. Open air spaces such as parks, transportation corridors, etc. also need signal boosting capabilities.

Specification above: Consumer Boosters must be bi-directional RF amplifiers.

Suggested revision: Consumer Boosters must use a single direction amplifier for the downlink or bi-directional RF amplifiers.

Explanation: The importance of this specification is that a carrier has access to a downlink path to shut off boosters that are interfering with their network. However, if an amplifier has only a downlink directional RF amplifier that requirement still exists. A downlink-only signal booster creates no noise as there is no uplink, therefore should also be allowed and not banned. A signal booster with a downlink RF amplifier is a viable boosting solution and should not be banned as it does not cause interference to the network. Consumer boosters built with a downlink-only amplifier will also be more affordable. Again, if there is no uplink (for downlink only boosters) there can be no CDMA base station receiver overload or broadband noise interference.

Specification above: The specifications are technology neutral and provide protection to all CMRS network technologies and that are used on Cellular, PCS, AWS and 700 MHz commercial mobile radio frequency bands.

Comment: This statement is not accurate if you require signal boosters to be bi-directional. This specification unfairly favors certain manufacturers and bi-directional only amplifiers offer no network protection benefit over downlink only amplifiers. Downlink-only amplifiers, because there is no uplink, do not cause network interference. Therefore the specifications for Consumer Boosters need to include downlink-only amplifiers to be technology neutral.

Specification above: Consumer Boosters must not exceed 1 Watt uplink composite power per band of operation and 0.05 Watt downlink composite power per band of operation.

Comment: Totally agree with the Boosters not exceeding 1 Watt uplink composite power, however there is no minimum Watt power specified for the downlink or uplink. We suggest that there be no FCC requirements for downlink-only or bi-directional amplifiers consumer boosters operating below 150 Milliwatt downlink composite power per band of operation. Boosters operating at this low power level cause no interference to CMRS networks and these boosters actually help the network by reducing CDMA overload.

Suggested additional specification: Consumer Boosters using downlink-only or bi-directional amplifiers will not require FCC Type Certification if they deploy less than 150 Milliwatt composite power per band of operation.

We ask the Commission to include these revisions and suggestions in the framework for Commission action.

Sincerely,

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